

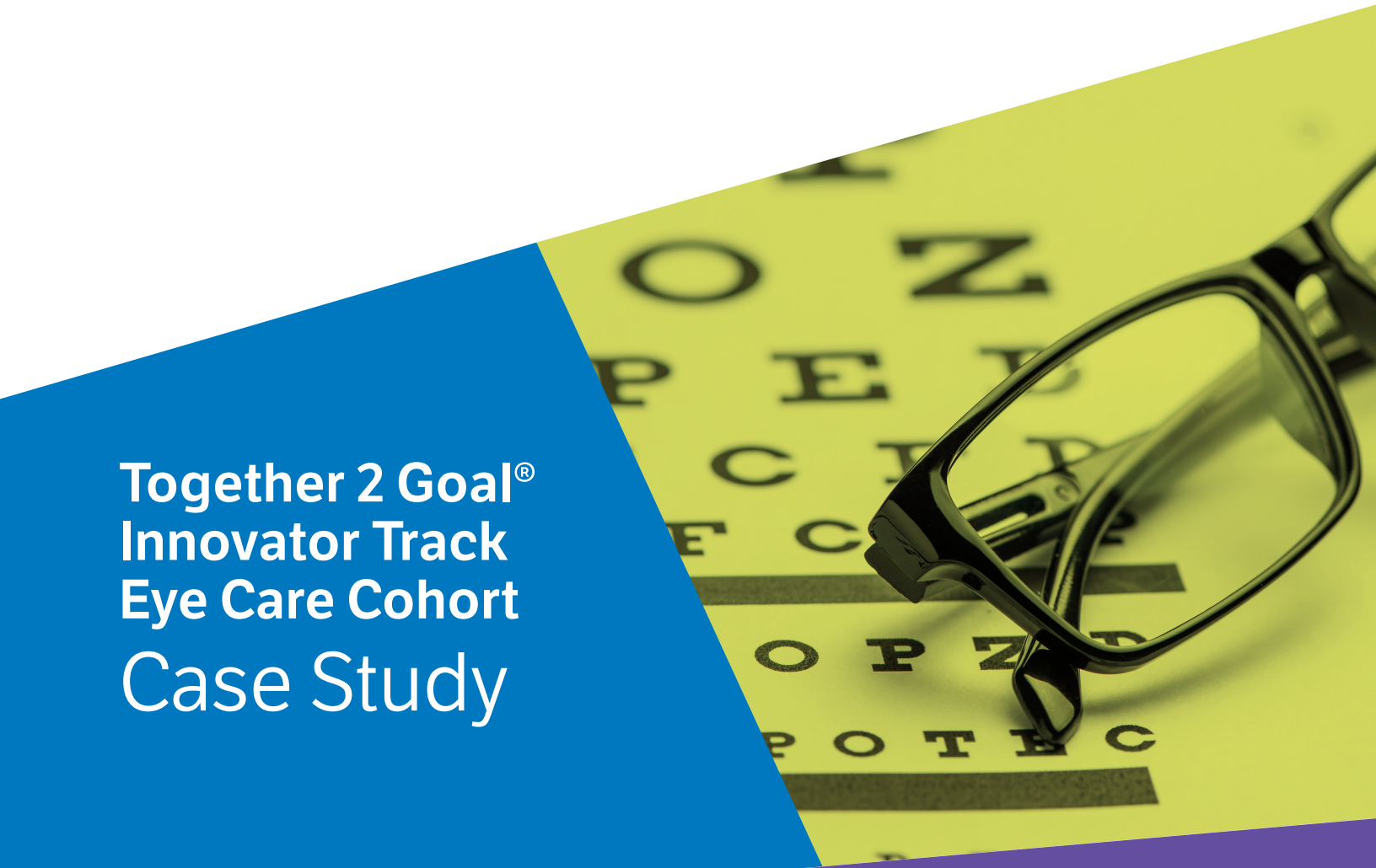


Advancing High Performance Health

**Together2Goal.**  
AMGA Foundation

**Together 2 Goal®  
Innovator Track  
Eye Care Cohort  
Case Study**

**Geisinger**



## Organizational Profile

Founded in 1915, Geisinger's organizational philosophy and structure was based on that of the Mayo Clinic. It has evolved from a single hospital into one of the largest health systems in the United States, serving 44 counties across Pennsylvania and six counties in New Jersey. The physician-led system employs more than 30,000, including an almost 2,000-physician member multispecialty group practice as well as 11 acute care hospitals, one alcohol and chemical dependency treatment center, two research centers, a medical school, and an insurance company.

## Executive Summary

According to the 2020 National Diabetes Statistics Report from the Centers for Disease Control and Prevention (CDC), more than 34 million Americans have diabetes, with up to 95% of those having Type 2 diabetes.<sup>1</sup>

Diabetes is the leading cause of new cases of blindness in adults, and diabetes-related blindness costs the United States about \$500 million annually.<sup>2</sup> The American Diabetes Association (ADA) recommends that people with diabetes get an eye exam following their diagnosis and at regular intervals every one to two years thereafter.<sup>3</sup> Despite these recommendations, a significant portion of patients with diabetes are not meeting the recommended screening guidelines.<sup>4</sup> AMGA convened the Together 2 Goal® (T2G) Innovator Track Eye Care Cohort (Eye Care Cohort) to address this problem by allowing groups to explore ways to increase eye exam rates for people with diabetes.

Geisinger has focused on screening patients with diabetes for retinopathy for many years. The organization has invested in information technology infrastructure, including implementing an electronic health record (EHR), utilizing population health software (Cerner HealthIntent), and teaming with the Keystone Health Information Exchange (KeyHIE). Additionally, in 2015, Geisinger launched a telemedicine retinal exam program that included placement of fundus cameras in the organization's large primary care and endocrinology clinics.

During the Eye Care Cohort, Geisinger refined its existing interventions and expanded its telemedicine retinal exam

program. The organization also worked to improve capture of exams done by eye providers, including implementing a best practice alert (BPA) to help capture information from providers employed by Geisinger and improving the process for requesting completed exams and working with KeyHIE to capture information from non-Geisinger providers.

## Program Goals and Measures of Success

Geisinger sought to improve their performance on the Cohort measure: the proportion of Type 2 diabetes patients in the T2G Cohort with a documented screening for diabetic retinal disease. This measure, selected by the Eye Care Cohort Advisory Committee, was based on an adapted version of the HEDIS 2018 Technical Specifications for Physician Measurement: Comprehensive Adult Diabetes Care: Eye Exam Numerator (see Appendix).

Geisinger established other measures of success as well, including increasing the number of fundus cameras in community medicine locations; increasing the number of images captured by each camera; and improving the capture rate of retinal exams done by eye providers including those employed by Geisinger Health as well as those outside the Geisinger network.

## Existing Diabetes Population and Care Structure

Geisinger cares for three million patients across 45 counties including over 40,000 patients who have diabetes. Geisinger has almost 50 primary care sites across northeastern Pennsylvania. Sites vary in size and location from very rural practices with a single provider to large groups in urban areas with almost 20 providers. Geisinger also has a large employed eye care provider group including both ophthalmologists and optometrists practicing in almost 20 clinics.

Patients with diabetes are identified through documentation in the EHR, Epic. Geisinger has a process where patients with high hemoglobin A1c or who are prescribed a medication typically used to treat diabetes are queried and providers are required to confirm if the patient has diabetes or not.

## Interventions

In 2015, Geisinger began piloting a telemedicine approach using fundus cameras located in primary care and endocrinology clinics. This allows a picture of a patient's retinas to be taken at a remote clinic and the image to be transferred to an ophthalmology provider for review. Nurses are alerted via BPAs during the rooming process if the patient they are rooming is overdue for an eye exam. Patients are given a handout on the importance of having their eyes examined, and if the patient agrees, they are taken to the camera where the images are taken and sent to an eye provider to review. Abnormal results are sent back to the ordering provider with a recommendation for follow-up. If patients have a normal result, a letter is sent to the patient informing them of the result and reminding them of the importance of future screening. A project dashboard created by Geisinger's Information Technology (IT) department tracks each step of the process, including the number of patients screened, the clinic provider's workflow, and the eye provider's workflow. Geisinger also tracks the percentage of patients with normal results, the percentage of results that were abnormal or uninterpretable, and appointments scheduled after providers refer patients to a Geisinger eye provider. Geisinger has expanded this program to 21 primary care sites and two endocrinology clinics.

As a result of its work with AMGA, Geisinger was able to identify several areas to improve its eye exam program. First, the organization found that many patients were leaving the office prior to having the images captured. To help, the team developed "eye cards" which included a 2"x2" picture of an eye. These cards were given to patients when an eye imaging order was placed to remind both the provider and the patient that the patient shouldn't leave until their eye exam is done.

Another area of opportunity Geisinger found was improving the capture of retinopathy screening results done by eye providers (i.e., both optometrists and ophthalmologists). For Geisinger-employed providers, the team put in place a BPA that allows them to discretely document the retinal exam. For non-Geisinger eye providers, the team is working on improved methods of data sharing. One of these methods is simplifying the process that primary care offices use when requesting the exam in order to eliminate the need for phone calls. The other is teaming with the KeyHIE to connect the EHRs of outside

eye providers to the Cerner HealthIntent tool to capture the results of retinopathy screenings they provide and satisfy the care gap.

Geisinger has also worked to improve its educational processes for patients and staff. For patients, Geisinger provides a handout during the office visit discussing the importance of retinopathy screening and describing the telemedicine retinal exam program. If patients agree to participate in the program, they receive a letter informing them of their results and the next steps. Geisinger also sends letters to patients overdue for retinopathy screening and encourages them to be screened.

For staff, Geisinger hosts quarterly webinars reviewing best practices and workflows. The organization also regularly provides updates on performance, including a direct message to nursing staff every time one of their patients is found to have retinopathy letting them know they "saved an eyeball."

A key part of this process for Geisinger was identifying patients who were overdue for retinopathy screening. Measuring compliance by using EHR data across the Geisinger system was critical. Geisinger identified patients by looking at the following: (1) if the patient had diabetes in their history, and (2) whether they had an approved mechanism of screening documented in the EHR in the past 12 months. If the patient was found to be overdue for screening, a BPA was triggered at the point of care. Additionally, compliance was measured and fed to a web-based diabetes dashboard, which measured performance around retinopathy and other diabetes quality measures at the system, clinic, and provider level. Geisinger currently uses an internally built and maintained dashboard. In addition, Geisinger uses the Cerner HealthIntent tool to aggregate data from various sources outside of the EHR, including data from health plans, KeyHIE, and others. The Cerner tool can also provide more advanced registries of Geisinger's population of patients with diabetes.

## Outcomes and Results

Overall, Geisinger saw a 3% improvement in the number of patients who had a documented screening for diabetic retinopathy during the Cohort timeframe, with a final screening rate of 66.5% (see Appendix). This was an accomplishment

considering the additional challenge that, during the Eye Care Cohort, Geisinger's total number of patients with diabetes increased from approximately 37,000 to over 39,000.

Geisinger observed that sites with fundus cameras outperformed those without a camera. Sites with a camera installed averaged greater than a 10% increase in their screening rates. Overall, Geisinger used fundus cameras to examine more than 4,200 patients during the 12 months of the Cohort, 500 of whom had abnormal results.

## Lessons Learned and Ongoing Activities

Through participation in the Eye Care Cohort, Geisinger learned several key lessons. First, local ownership at the clinic level is critical for success. The sites that did the best with the fundus cameras were those who were excited to have them and took accountability for screening patients. Geisinger also found that an efficient workflow is important; helping make it as easy as possible for staff to do the right thing enables change to be successful. Geisinger plans to continue to expand its camera program and improve its workflow.

Second, Geisinger learned that capturing retinal exams done by eye providers is important to close the data gap. Although many patients were regularly seeing eye care providers, Geisinger was not getting the results of the exams. Geisinger continues to work with non-employed eye care providers to efficiently share data and is still exploring the possibility of doing it seamlessly across KeyHIE.

Lastly, through its interventions, Geisinger has recognized that many patients with diabetes already have retinopathy or are newly diagnosed with retinopathy. These patients need regular follow-up and potentially need treatment to prevent blindness from diabetic retinopathy. Geisinger feels that a key next step is to close the loop and ensure that these patients are seen.

## References

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1. Centers for Disease Control and Prevention. 2020. National Diabetes Statistics Report, 2020 (Rep.). Retrieved from [cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf](https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf).
2. Centers for Disease Control and Preventions. n.d. Diabetic Retinopathy. Retrieved from [cdc.gov/visionhealth/pdf/factsheet.pdf](https://www.cdc.gov/visionhealth/pdf/factsheet.pdf).
3. Solomon, S. D., Chew, E., Duh, E. J., Sobrin, L., Sun, J. K., VanderBeek, B. L., Wykoff, C.C., Gardner, T. W. (2017). Diabetic Retinopathy: A Position Statement by the American Diabetes Association. *Diabetes Care*, 40(3), 412-418. doi:10.2337/dc16-2641.
4. Garg, S. & Davis, R. (2009). Diabetic Retinopathy Screening Update. *Clinical Diabetes*, 27(4), 140-145; doi: 10.2337/diaclin.274.140.

## Eye Care Cohort Measure

Measurement is a cornerstone of all facets of the T2G campaign, including the Innovator Track. During the Eye Care Cohort, groups measured rates of documented screening for diabetic retinal disease among the T2G Cohort with Type 2 diabetes and tracked improvement.

In keeping with AMGA Foundation's philosophy to measure improvement using existing industry-standard measures when possible, the denominator for the Eye Care Cohort was defined to be the same as the T2G Cohort for the campaign (i.e., patients with Type 2 diabetes who meet the T2G campaign criteria to be included in the four individual core components and the diabetes bundle measure). This denominator is broadly defined as patients age 18–75 with:

- Two or more eligible ambulatory encounters with an eligible primary care, endocrinology, cardiology, or nephrology provider in the last 18 months **AND**
- At least one Type 2 diabetes on a claim or problem list in that same 18-month period.

For complete denominator measure specifications with inclusion and exclusion criteria, see Together 2 Goal® Campaign Measurement Specifications (v3, April 2019).

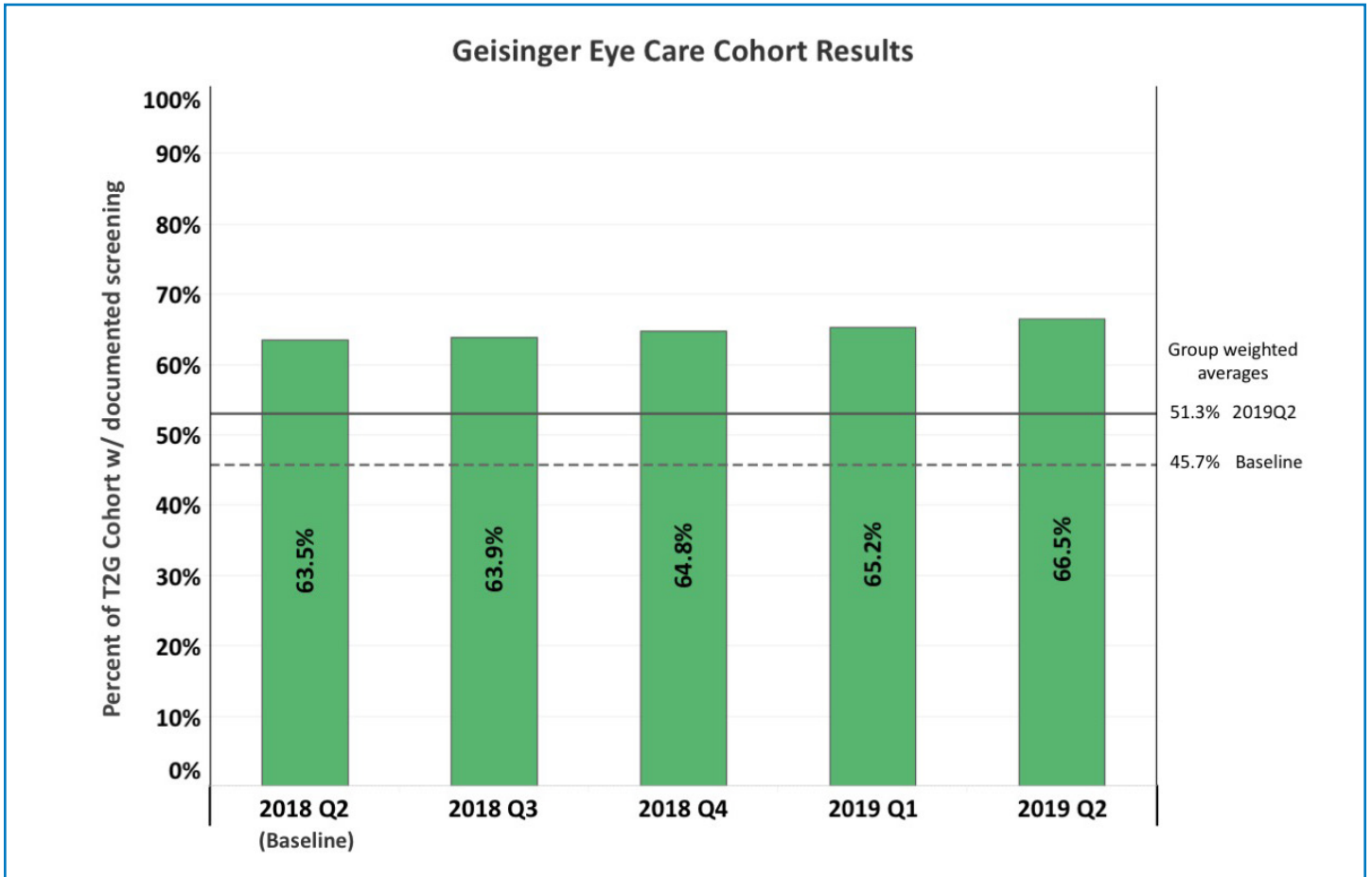
The numerator for the measure was determined to be those T2G Type 2 diabetes patients who met the criteria for HEDIS 2018 Technical Specifications for Physician Measurement: Comprehensive Adult Diabetes Care: Eye Exam Numerator.

Screening or monitoring for diabetic retinal disease was identified by electronic data or medical record review and included:

- A retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) in the measurement year;
- A negative retinal exam (negative for retinopathy) by an eye care professional in the year prior to the measurement year; or
- A bilateral eye enucleation anytime during the patient's history through the end of the measurement period.

Eye Care Cohort participants were provided detailed measure specifications and relevant HEDIS value sets.

## Geisinger Eye Care Cohort Results



## Project Team

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